

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 3, 7, 10 and 14-24, and AMEND claims 1, 5, 6, 8 and 13 in accordance with the following:

1. (CURRENTLY AMENDED) A linear equalizer for a single carrier receiver, comprising:

a channel estimation unit estimating channel estimation values using a received signal inputted thereto and a generated field synchronizing signal;

a filter unit initializing coefficients of filters based on the channel estimation values and filtering a pre-ghost and a post-ghost of the received signal; and

an error calculation unit calculating an equalization error using an output signal from said filter unit,

wherein said channel estimation unit includes:

a correlation cumulation unit calculating and cumulating correlation values between the received signal and the field synchronizing signal; and

an estimation decision unit deciding the channel estimation values by applying a predetermined threshold value to the cumulated correlation values.

2. (ORIGINAL) The linear equalizer according to claim 1, wherein said filter unit updates the coefficients of the filters according to the equalization error and filters the pre-ghost and post-ghost using the updated coefficients of the filters.

3. (CANCELLED)

4. (ORIGINAL) The linear equalizer according to claim 1, further comprising:
a decision unit deciding a signal level for an output signal from said filter unit,
wherein said error calculation unit calculates the equalization error using an input signal
to said decision unit and an output signal from said decision unit.

5. (CURRENTLY AMENDED) The linear equalizer according to claim 14, wherein
said error calculation unit calculates the equalization error using the output signal from said
decision unit and the field synchronizing signal.

6. (CURRENTLY AMENDED) An equalizing method of a linear equalizer, the
method comprising:

estimating a channel estimation value using a received signal and a field synchronizing
signal for a single carrier receiver;

initializing coefficients of filters using the channel estimation value in order to remove a
pre-ghost and post-ghost of the received signal;

calculating an equalization error to update the coefficients of said filters; and

updating the coefficients of said filters according to the equalization error, thereby filtering
the pre-ghost and the post-ghost,

wherein the estimating the channel estimation value comprises:

computing and cumulating correlation values by using a correlation between the received
signal and the field synchronizing signal; and

deciding the channel estimation value by applying a predetermined threshold value to the
cumulated correlation values.

7. (CANCELLED)

8. (CURRENTLY AMENDED) A decision feedback equalizer for a single carrier
receiver, comprising:

a channel estimation unit estimating a channel estimation value using a received signal
inputted thereto and a generated field synchronizing signal;

a feed forward (FF) unit initializing coefficients of a first filter based on the channel
estimation value, and filtering a pre-ghost of the received signal;

a feedback (FB) unit initializing coefficients of a second filter based on the channel estimation value, and filtering a post-ghost of the received signal; and
an error calculation unit calculating an equalization error using output signals from said FF and FB units,

wherein said channel estimation unit comprises:
a correlation cumulation unit calculating and cumulating correlation values between the received signal and the field synchronizing signal; and
an estimation decision unit deciding the channel estimation value by applying a predetermined threshold value to the cumulated correlation values.

9. (ORIGINAL) The decision feedback equalizer according to claim 8, wherein said FF and FB units update the coefficients of the first and second filters, respectively, according to the equalization error and filter the pre-ghost and the post-ghost using the updated first and second filters.

10. (CANCELLED)

11. (ORIGINAL) The decision feedback equalizer according to claim 8, further comprising:

an adder adding the output signals from said FF and FB units to output a resulting signal;
a decision unit deciding a signal level for the output signal from said adder and inputting the resulting signal of the predetermined level to said FB unit,
wherein said error calculation unit calculates an equalization error using the input signal to said decision unit and the output signal of the predetermined level from said decision unit.

12. (ORIGINAL) The decision feedback equalizer according to claim 11, wherein said error calculation unit calculates the equalization error using the output signal from said adder and the field synchronizing signal.

13. (CURRENTLY AMENDED) An equalizing method of a decision feedback equalizer, the method comprising:

estimating a channel estimation value using a received signal inputted thereto and a field synchronizing signal for a single carrier receiver;

initializing coefficients of a first filter and a second filter to filter a pre-ghost and a post-ghost, respectively, of the received signal using the channel estimation value;

calculating an equalization error to update the coefficients of the first and the second filter; and

updating the coefficients of said first filter and said second filter according to the equalization error, thereby filtering the pre-ghost and the post-ghost,

wherein the estimating the channel estimation value includes:

calculating and cumulating correlation values between the received signal and the field synchronizing signal; and

an estimation decision unit deciding the channel estimation value by applying a predetermined threshold value to the cumulated correlation values.

14-24. (CANCELLED)